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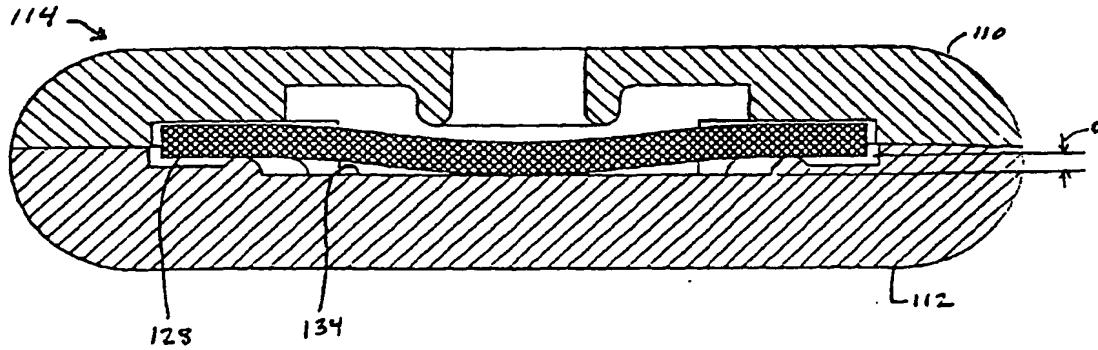
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(57) Abstract: A valve assembly for a pump includes a pump chamber and a pump head having complementary recesses formed therein which cooperate to define a valve compartment including a pocket and an opposed seat. A flexible valve element is disposed between the recesses and adapted to move between a closed position against the seat which prevents fluid flow and an open position away from the valve seat which permits fluid flow. The dimensions of the valve compartment are selected to limit the movement of the valve element in the open position, which increases the pump efficiency and prevents damage to the valve element and/or valve overlap.